D-Link®
Building Networks for People

Product Highlights

Comprehensive Management Solution

Active-Active WAN port features such as auto WAN failover and load balancing, ICSA-certified firewall, and D-Link Green Technology make this a reliable, secure, and economic choice to manage your network

Complete VPN Features

With fully featured VPN as well as IPSec Hub and Spoke technology, secure communication between mobile employees and offices can be easily configured and guaranteed in any environment

Web Authentication Capabilities

Captive Portal allows employees and guest users to be easily authenticated and authorized by accessing customized landing pages

DSR Series

Unified Services Routers

Features

High-Performance VPN

- Protocols
  - IPSec
  - PPTP/L2TP
  - GRE[1]
  - SSL
- VPN Tunnels
  - DSR-150/150N: Up to 26 tunnels
  - DSR-250/250N: Up to 65 tunnels
  - DSR-500/500N: Up to 85 tunnels
  - DSR-1000/1000N: Up to 135 tunnels
- DES, 3DES, AES

Enhanced Network Services

- IPv6
- IEEE 802.1q VLAN
- Multiple SSIDs[2]
- Port Monitoring/Bandwidth Control
- srTCM, trTCM, & policing

Wireless Access and Security[2]

- IEEE 802.11 a[5]/b/g/n (2.4 GHz, 5 GHz[5])
- IEEE 802.1x RADIUS Authentication with EAP-TLS, EAP-TLLS, EAP-PEAP
- WPS, WEP, WPA-PSK, WPA-EAP, WPA2-PSK, WPA2-EAP

Fault Tolerance[3]

- WAN Traffic Failover & Outbound Load Balancing

The D-Link DSR Series Unified Services Routers provide secure, high-performance networking solutions to address the growing needs of small and medium businesses. The integrated high-speed IEEE 802.11n wireless technology in the DSR-150N, DSR-250N, DSR-500N, and the DSR-1000N routers offers comparable performance to traditional wired networks, but with fewer limitations. Each router provides optimal network security via features such as Virtual Private Network (VPN) tunnels, IP Security (IPSec), Point-to-Point Tunneling Protocol (PPTP), Layer 2 Tunneling Protocol (L2TP), Generic Routing Encapsulation (GRE)[1], and Secure Sockets Layer (SSL). These routers also allow you to empower your road warriors with clientless remote access anywhere and anytime using SSL VPN tunnels.

Comprehensive Management Capabilities

The DSR-500/500N and DSR-1000/1000N include dual-WAN Gigabit Ethernet that provides policy-based service management to ensure maximum productivity for your business operations. The failover feature maintains data traffic without disconnecting when a landline connection is lost. The Outbound Load Balancing feature adjusts outgoing traffic across two WAN interfaces and optimizes system performance, resulting in high availability. The second WAN port can be configured as a DMZ port, allowing you to isolate servers from your LAN.

Superior Wireless Performance

The DSR-150N, DSR-250N, DSR-500N, and DSR-1000N include 802.11a[5]/b/g/n, allowing for operation on either the 2.4 GHz or 5 GHz[5] wireless LAN radio bands. Multiple In Multiple Out (MIMO) technology allows the DSR-150N, DSR-250N, DSR-500N, and DSR-1000N to provide high data rates and a wide wireless coverage area with minimized "dead spots."

Flexible Deployment Options

The DSR Series supports Third Generation (3G) networks via an extendable USB 3G dongle[4]. This 3G network capability offers an additional data connection for critical or backup services. For the DSR-1000/1000N, a 3G USB dongle can be configured as a third WAN port, performing

Traffic Load Balancing and executing automatic failover whenever the primary WAN link gets lost. For the DSR-500/500N,[1] the second WAN port could be a dedicated WAN2 or 3G dongle, performing Traffic Load Balancing and executing automatic failover whenever the primary WAN link gets lost. For the DSR-150/150N/250/250N,[1] the 3G dongle could be configured as a backup link when the primary WAN link is down or configured as the primary WAN port.

Robust VPN Features

A fully featured virtual private network (VPN) provides your mobile workers and branch offices with a secure link to your network. The DSR-150/150N, DSR-250/250N, DSR-500/500N, and DSR-1000/1000N are capable of simultaneously managing 1, 5, 10, or 20 Secure Sockets Layer (SSL) VPN tunnels respectively, as well as 5, 10, 15, or 20 Generic Routing Encapsulation (GRE) tunnels[1], empowering your mobile users by providing remote access to a central corporate database. Site-to-site VPN tunnels use IP Security (IPSec) Protocol, Point-to-Point Tunneling Protocol (PPTP), or Layer 2 Tunneling Protocol (L2TP) to facilitate branch office connectivity through encrypted virtual links. The DSR-150/150N simultaneously supports up to 10 IPSec VPN tunnels plus 10 additional PPTP/L2TP tunnels. The DSR-250/250N, DSR-500/500N, and DSR-1000/1000N simultaneously support up to 25, 35, and 70 IPSec VPN tunnels respectively, and 25 additional PPTP/L2TP tunnels.

Efficient Green Technology

D-Link Green Wi-Fi and D-Link Green Ethernet features save power and help cut energy usage costs. The D-Link Green WLAN Scheduler shuts down your wireless network automatically according to a schedule you define, allowing you to turn off your wireless network during off-peak hours, saving energy and keeping your network secure. The D-Link Green Ethernet feature can detect if a link is down on a port, and automatically puts that port into a sleep mode that drastically reduces the amount of power used. In addition, compliance with RoHS (Restriction of Hazardous Substances) and WEEE (Waste Electrical and Electronic Equipment) directives make D-Link Green-certified devices an environmentally responsible choice.

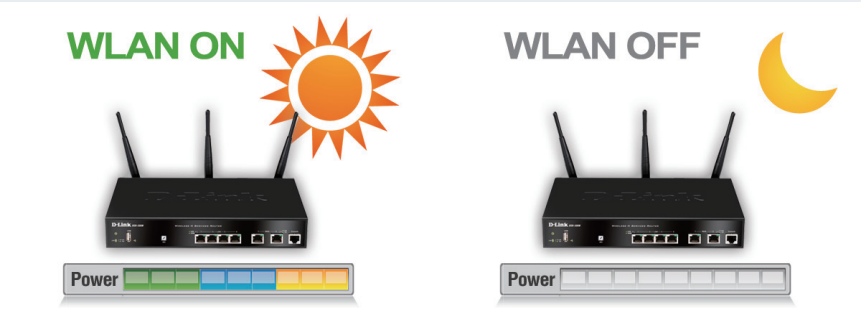
DSR-150/150N

DSR-250/250N

DSR-500/500N

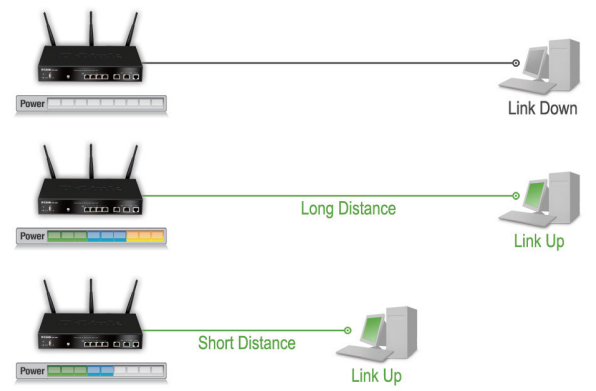
DSR-1000/1000N

Green Wi-Fi[2]



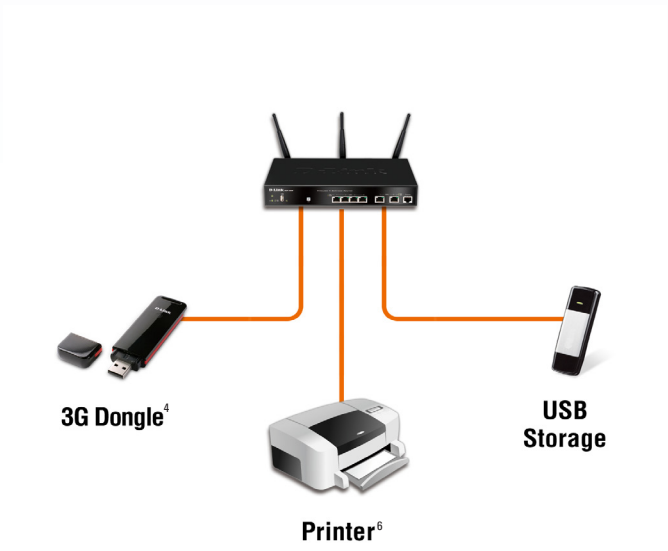
The WLAN Scheduler shuts down the WLAN during off-peak hours to enhance network security and save power.

Green Ethernet



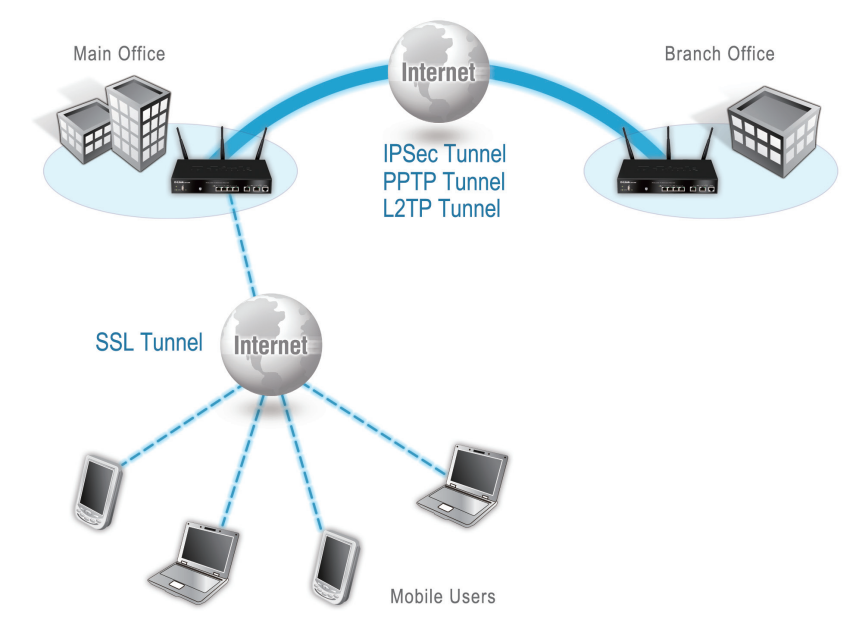
D-Link Green Ethernet detects link status and cable length and adjusts power usage accordingly.

USB 2.0 Extension

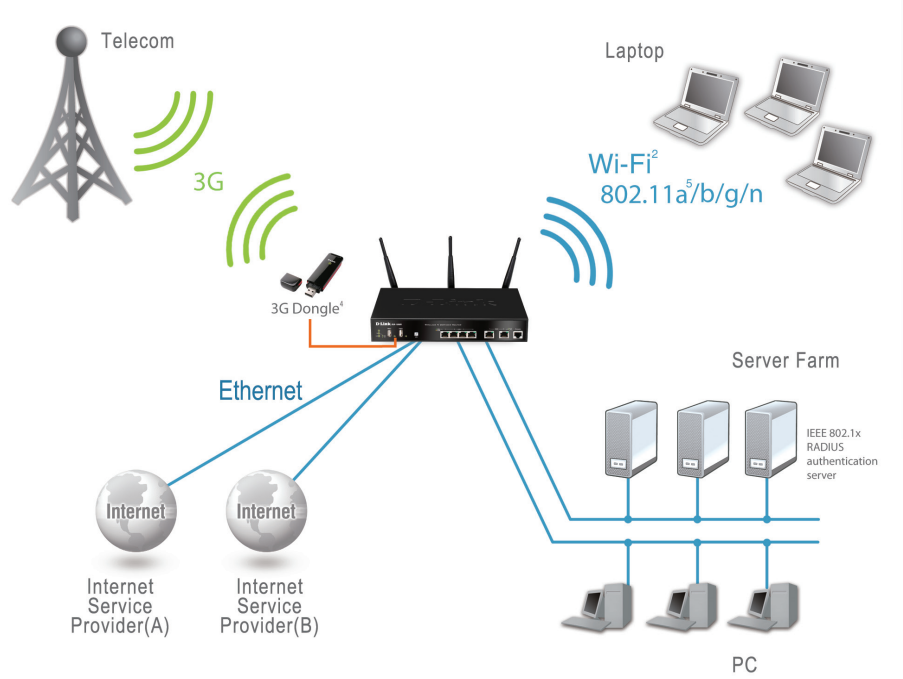


Supports one (DSR-150/150N/250/250N/500/500N) or two (DSR-1000/1000N) USB 2.0 devices to extend functionality.

Secure VPN Network Implementation



Dual WAN for Redundant Internet



Technical Specifications

General	DSR-150/150N	DSR-250/250N	DSR-500/500N	DSR-1000/1000N
Hardware Version	DSR-150: A1 DSR-150N: A2	A1		
Ethernet Interface	10/100 Mbps WAN Port 8 10/100 Mbps LAN Ports	10/100/1000 Mbps WAN Port 8 10/100/1000 Mbps LAN Ports	2 10/100/1000 Mbps WAN Ports 4 10/100/1000 Mbps LAN Ports	2 10/100/1000 Mbps WAN Ports 4 10/100/1000 Mbps LAN Ports
Wireless[1] Interface	802.11b/g/n (Single Band) 2 Internal 2dBi Omni-Directional Antennas	802.11b/g/n (Single Band) 2 Detachable 2 dBi Omni-Directional Antennas	802.11b/g/n (Single Band) 3 Detachable 2 dBi Omni-Directional Antennas	802.11a/b/g/n (Selectable Dual Band) 3 Detachable 2 dBi Omni-Directional Antennas
USB 2.0 Ports	1			2
Console Port	RJ-45			
Performance[8]				
Firewall Throughput[7]	95 Mbps	750 Mbps	950 Mbps	950 Mbps
VPN Throughput[9]	85 Mpps	95 Mpps	115 Mpps	150 Mpps
Concurrent Sessions	20,000		30,000	60,000
New Sessions (per second)	200		300	600
Firewall Policies	200		300	600
Internet Connection Type				
Static/ Dynamic IP	✓			
PPPoE/ L2TP/ PPTP	✓			
Multiple PPPoE	✓			
Firewall System				
Static Route	✓			
Dynamic Route	—		RIPv1, RIP v2, OSPF[10]	
Dynamic DNS	✓			
Inter-VLAN Route	✓			
NAT, PAT	✓			
Web Content Filtering	Static URL, Keywords			
Intrusion Prevention System (IPS)	—	Signature Package Included in Firmware		

Technical Specifications

Networking	DSR-150/150N	DSR-250/250N	DSR-500/500N	DSR-1000/1000N
DHCP Server/ Client	✓			
DHCP Relay	✓			
IEEE802.1q VLAN	✓			
VLAN (Port-Based)	✓			
IP Multicast	IGMP Proxy			
IPv6[11]	✓			
Route Failover	—		✓	
Outbound Load Balancing	—		✓	
3G Redundancy	✓			
Wireless[2]				
Multiple Service Set Identifier (SSID)	✓			
Service Set Identifier (SSID) to VLAN Mapping	✓			
Standards	802.11b/g/n			802.11a/b/g/n
Wireless Security	Wired Equivalent Privacy (WEP) Wi-Fi Protect Setup (WPS) Wi-Fi Protected Access – Personal (WPA-PSK) Wi-Fi Protected Access – Enterprise (WPA-EAP) Wi-Fi Protected Access version 2 – Personal (WPA-PSK) Wi-Fi Protected Access version 2 – Enterprise (WPA-EAP)			
Virtual Private Network (VPN)				
VPN Tunnels	26	65	85	135
IPSec Tunnels	10	25	35	70
SSL VPN Tunnels	1	5	10	20
PPTP/L2TP Clients	10	25		
GRE[1]	5	10	15	20
Encryption Methods	DES, 3DES, AES, Twofish, Blowfish, CAST-128, NULL			
SSL Encryption Methods	RC4-128, 3DES, AES			
IPSec/PPTP/L2TP Server	✓			
IPSec NAT Traversal	✓			
Dead Peer Detection	✓			
IP Encapsulating Security Payload (ESP)	✓			
IP Authentication Header (AH)	✓			
VPN Tunnel Keep Alive	✓			
Hub and Spoke	✓			

Technical Specifications

Bandwidth Management	DSR-150/150N	DSR-250/250N	DSR-500/500N	DSR-1000/1000N
Maximum Bandwidth Control	✓			
Priority Bandwidth Control	Port-based QoS 3 Classes			
System Management				
Web-based User Interface	HTTP, HTTPS			
Command Line	✓			
SNMP	v1, v2c, v3			
Physical & Environment				
Power Supply	External Power Supply Unit DC 12 V/1.5 A		Internal Power Supply Unit DC 12 V/2.5 A	
Max. Power Consumption	7.44 W/ 10.5 W	11.8 W/ 12.6 W	15.6 W/ 16.8 W	17.2 W/ 19.3 W
Dimensions (L x W x H)	208 x 118 x 35 mm (8.19 x 4.65 x 1.38 inches)	140 x 203 x 35 mm (5.51 x 8.0 x 1.38 inches)	180 x 280 x 44 mm (7.09 x 11.02 x 1.73 inches)	
Operation Temperature	0 to 40 °C (32 to 104 °F)			
Storage Temperature	-20 to 70 °C (-4 to 158 °F)			
Operation Humidity	5% to 95% non-condensing			
EMI/EMC	FCC Class B, CE Class B, C-Tick, IC			FCC Class B, CE Class B, C-Tick, IC, VCCI[2]
Safety	cUL, LVD (EN60950-1)			
3rd Party Certification	IPv6 Ready, Wi-Fi, ICSA-Certified Firewall, VPNC AES Interop, VPNC Basic Interop			
MTBF	240,000 hours	250,000 hours	260,000 hours	

[1] Available through firmware upgrade.
[2] DSR-150N/250N/500N/1000N only.
[3] DSR-500/500N/1000/1000N only.
[4] The following 3G dongles are supported: DWM-152 A1/A2/A3, DWM-156 A1/A2/A3/A5*/A6*, DWM-157*, Huawei E1550, E173, and EC306.* The dongles marked with * will be supported through firmware upgrades.
[5] DSR-1000N only.
[6] Printer support list can be referred to at http://www.openprinting.org/printers.
[7] Firewall throughput is measured using UDP traffic with a 1,518 bytes packet size, adhering to RFC2544.
[8] Actual performance may vary depending on network conditions and activated services.
[9] VPN throughput is measured using UDP traffic with the packet size 1420 bytes and encryption method AES-128 plus SHA-1, adhering to PFC2544.
[10] Available with future firmware upgrade.
[11] IPv6 Ready Logo(Core) is available for DSR-500/500N and DSR-1000/1000N.

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